# Questions

Questions are more important than answers (fig. 8). Science students should learn to formulate clear questions about nature and, once formulated, ask them of several authorities. In the process, the student will probably learn that it is necessary to personally observe nature closely. The petrographic microscope is one of the most important tools available to the geologist.

Some questions related to lunar science are suggested below:

1 What evidence supports the notion that lunar anorthosites are very old?

2 Are the numerous lunar craters a result of comets or disturbed asteroids? How could you tell them apart?

3 What evidence exists for plagioclase flotation in a global magma ocean?

4 Rays are evidence that exotic materials travel great distances. Why is so little mare material present at the Apollo 16 site?

5 Did the Earth have a megolith (deep regolith) after the lunar cataclysm?

6 Why don't meteorites record the 3900- to 4000-million-year event?

7 Are catastrophic events important to a planet's thermal history?

8 How many separate chemical reservoirs have been sampled in the solar system?

9 Are any of the samples returned by the Apollo missions likely to be Orientale ejecta?

10 What is the chemical composition of the whole Moon?

11 Is the interior of the Moon still molten?

12 Is frozen water present in the permanently shadowed regions of the lunar poles?

13 What was the gas that evolved during basaltic volcanism?

14 How can magma form from a source that is already "depleted" in trace elements?

15 Does erupted volcanic liquid always assimilate crustal material during volacanism?

These questions, and others that you might formulate, have not been fully answered yet!



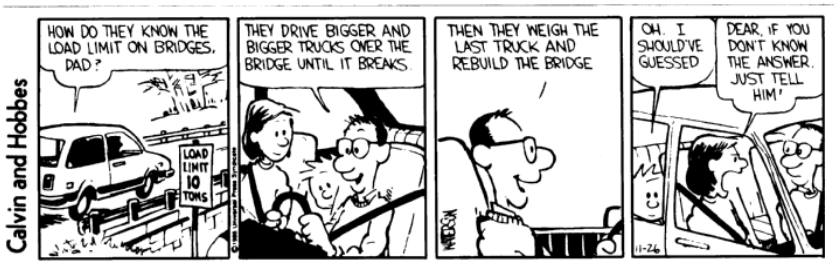


**Figure 8.**— Questions are more important than answers because answers are guesswork by authorities.